CLAIMS:

1. A power supply system for a machine having a plurality of components, comprising:

a power source;

a set of two or more voltage converters connected in parallel and coupled to the power source via a common bus; and

an electrical supply line coupled to an output of the set of voltage converters for supplying a required voltage to the components of the machine connected to the electrical supply line.

2. A system as claimed in claim 1, including a power factor correction system coupled between the power source and the voltage converters.

3. A system as claimed in claim 2, wherein the power factor correction system comprises a plurality of power factor correction devices connected in parallel.

4. A system as claimed in claim 3, wherein the power factor correction device includes an AC/DC rectifier.

5. A system as claimed in claim 1, wherein the voltage converters comprise DC/DC converters.

6. A system as claimed in claim 1, wherein the voltage of the common bus is within the range of 300 – 400V.

7. A system as claimed in claim 1, wherein two or more of the voltage converters are connected in series.

8. A system as claimed in claim 7, including a switching module associated with each voltage converter for interchangeably configuring a voltage converter with another voltage converter in series or in parallel.

9. A system as claimed in claim 1, including an additional voltage converter connected in parallel to the voltage converters for providing an output current that is higher than a current required by the components connected to the electrical supply line.

10. A system as claimed in claim 1, including a second electrical supply line requiring a different voltage from the electrical supply line that is coupled to the voltage converters for supplying current to another set of components of the machine.

11. A system as claimed in claim 1, including a separate set of voltage converters coupled to the power source for supplying one or more logic voltages to the machine.

12. A system as claimed in claim 11, wherein the separate set of voltage converters are connected in parallel.

13. A system as claimed in claim 1, wherein the voltage converters comprise AC/DC converters with isolators.

14. A system as claimed in claim 1, including a line filter coupled between the power source and voltage converter for reducing noise from the system.

15. A system as claimed in claim 1, wherein the set of voltage converters is configured to detachably receive additional voltage converters for coupling to the power source and electrical supply line.

16. A system as claimed in claim 1, wherein an output voltage of each voltage converter is greater than 48V.

17. A system as claimed in claim 1, wherein the power consumption of the machine is in the range of 600W to 4,000W.

18. A system as claimed in claim 1, wherein the machine is one used for semiconductor assembly.

19. A method of providing a power supply to a machine having a plurality of components, comprising the steps of:

coupling a set of two or more voltage converters connected in parallel to a power source via a common bus;

coupling an electrical supply line to an output of the set of voltage converters; and

connecting the components to the electrical supply line.

20. A method as claimed in claim 19, including the step of coupling a power factor correction system between the power source and the voltage converters.

21. A method as claimed in claim 20, wherein the power factor correction system comprises a plurality of power factor correction devices connected in parallel.

22. A method as claimed in claim 20, wherein the power factor correction devices includes an AC/DC rectifier.

23. A method as claimed in claim 19, wherein the voltage converters comprise DC/DC converters.

24. A method as claimed in claim 19, including connecting two or more of the voltage converters in series.

25. A method as claimed in claim 24, including interchangeably configuring a voltage converter with another voltage converter in series or in parallel according to a voltage required by the electrical supply line.

26. A method as claimed in claim 19, including coupling a second electrical supply line to the voltage converters for supplying current to another set of components of the machine.

27. A method as claimed in claim 19, including coupling a separate set of voltage converters to the power source for supplying one or more logic voltages to the machine.

28. A method as claimed in claim 27, wherein the voltage converters are connected in parallel.

29. A method as claimed in claim 19, wherein the voltage converters comprise AC/DC converters with isolators.

30. A method as claimed in claim 19, wherein the power consumption of the machine is in the range of 600W to 4,000W.